

SALOL

IN THE TREATMENT OF DIARRHŒA, DYSENTERY
AND INTESTINAL INFLAMMATION.

PIL. SALOL, "W. H. S. & CO."

2½ grs. and 5 grs. each.

SALOL at first was used chiefly in rheumatism and its allied diseases, but since its introduction it has been utilized by the medical profession in other diseases with great success, notably in **DIARRHŒA** and **DYSENTERY**.

DR. E. L. VANSANT, Demonstrator of Pathological Histology and Chief of Med. Clinic, Med.-Chirurgical College, in an article *vide Philadelphia Medical Times*, October 15th, 1888, says :

"The following is a rather meagre and imperfect report of a number of cases of diarrhœa treated by salol, and salol in combination with the subnitrate of bismuth. It was particularly in those cases with marked disturbance of the stomach that the bismuth was added.

"A dozen or more cases in addition to the following were put upon salol, but did not return to report result of treatment ; perhaps their failure to return was due to being cured.

"It was found that the use of the remedy every three hours gave much better results than when given only three times a day.

"1. William H., age thirty-two. July 24th. Patient complains of pain and diarrhœa since July 4th ; evacuations watery. Ordered

R Bismuthi subnitrat..... 3 ij
Salol gr. xl

M. et in chart. no. x div. Sig.—One powder every three hours.

"July 27th. Patient reports relieved.

"2. John F., age twenty-six. July 26th. Acute diarrhœa, stools watery and very frequent, little pain, patient feels very weak ; ordered salol, gr. iv, ter in die.

"July 27th. Reports improvement, passages, however, still frequent and loose ; ordered

R Bismuthi subnitrat gr. x
Salol gr. iv

Sig.—Every three hours.

"July 28th. Patient reports diarrhœa ceased.

"3. David S., age one and a half years. July 28th. Pain, diarrhœa and vomiting of one day's duration ; diet corrected ; ordered subnitrate of bismuth, 4 grains with salol, 1½ grains every three hours.

"July 30th. Patient entirely well.

"4. Mary B., age eleven. July 31st. Patient complains of diarrhoea and vomiting for past week; evacuations watery, with much pain.

R Salol..... gr. xxiv
M. et in chart. no. vi div. Sig.—One powder every three hours.

"August 1st. Reports improvement; ordered ten-grain doses of bismuth to be added to the salol.

"August 2d. Reports entirely well.

"5. Lizzie M., age twenty-six. August 10th. Patient complains of acute attack of diarrhoea and vomiting, pain in abdomen and sleeplessness; ordered

R Bismuthi subnitrat 3 ij
Salol gr. xxiv
M. et in chart. no. xij div. Sig.—One powder every three hours.

"August 28th. Patient reports diarrhoea, vomiting, etc., were entirely relieved by the powders.

"6. J. R. W., age fifty-seven. August 8th. History of attacks of dysentery at irregular intervals during the past ten years. Attacks occur sometimes in winter, sometimes in summer. The present attack has lasted six weeks, and has resisted all treatment. Patient is an old army man, and says he had the dysentery in the army. At present the motions are perfectly fluid, three to twelve in twenty-four hours, but not much pain; ordered

R Bismuthi subnitrat 3 ij
Salol gr. xlviij
M. et in chart. no. xij div. Sig.—One powder every three hours.

"August 10th. Reports having had only one slight passage since yesterday noon. Feels better and has appetite.

"7. John S., age twenty-two. August 10th. Complains of weakness, with vomiting of greenish-colored fluid, and diarrhoea, during past few days; ordered

R Bismuthi subnitrat..... gr. x
Salol..... gr. iiij
Sig.—Every three hours.

"August 12th. Patient entirely relieved.

"8. James M., age thirty-three. August 10th. Patient complains of diarrhoea, loss of appetite; passages watery and attended with pain; ordered

R Salol..... gr. xl
Div. in chart. no. x. Sig.—One every three hours.

"August 14th. Patient reports diarrhoea, etc., stopped after three powders.

"9. George W. Fox, age thirty. August 15th. Diarrhoea for three days; stools very frequent and watery; ordered salol, gr. v, every three hours.

"August 17th. Reports improvement; passages, however, still frequent; added bismuth subnitrat, gr. x, every three hours.

"August 21st. Reports well.

"10. Katie D. August 4th. Diarrhoea and vomiting for past few days; patient has slight fever.

R Salol..... gr. xxiv
 Bismuthi subnitrat..... 3 j
 M. et in chart. no. xij div. Sig.—One powder every three hours.

" August 6th. Reports cured.

" 11. Eugene S., age ten months. September 19th. Diarrhoea for four days, motions very frequent, loose, and of a foul-smelling character ; ordered

R Salol..... gr. xij
 Div. in chart. no. xij. Sig.—One powder every three hours.

" September 20th. Mother reports diarrhoea stopped after one powder."

R. B. McCALL, M.D., in an article *vide St. Louis Medical Brief*, November, 1888, says :

" Of late much has been said and written of the virtues of salol in the treatment of diarrhoea and dysentery, from which it might be inferred that a specific for these ailments has at last been found. The confident assurance with which the claims of the new favorite have been urged afforded me sufficient reason to make a trial of it when suitable opportunity was offered. I present the following notes :

" Bobby H., a very delicate boy, five years of age, had for the first time frequent bloody stools on August 1st, for which parents gave home-made treatment. During the next three or four days the child's condition varied slightly, with, however, an observable steady increase in the frequency of the dejections, and an augmentation of the quantity of blood and nausea.

" On the fifth day I was requested to see the patient, whom I found reclining, restless and fretful, entirely disinclined to be amused. There was feverishness with slight elevation of temperature, pulse rate 140, eyes preternaturally bright, cheeks flushed, tongue red at tips and border, centrally heavily loaded with a yellow, mushy coat, skin sallow and relaxed, muscles soft and wanting normal firmness, stomach perceptibly tender, no bloat nor tenderness of abdomen. One evacuation examined by me was very large, and contained about three or four ounces of mingled blood and mucus without a trace of faecal matter. This, I was told, was the general character, amount being variable, some almost wholly sanguinolent.

" For the first two days the following was taken with manifest advantage :

R Ext. ergotæ fl..... $\frac{1}{2}$ ounce.
 Sig.—Ten drops every three or four hours in a little water.

" Which was supplemented by a few drops of tinct. opii camph. given at brief intervals, to relieve pain, with :

R Tinct. aconiti specif..... 5 drops.
 Aquæ..... 4 ounces.
 M. Sig.—Teaspoonful every two hours for its tranquillizing influence.

" Number of stools diminished to less than one half, their sanguinolent feature almost disappearing.

" However, on account of delirium, which it was thought was caused by the ergot, the medicine was discontinued, the opiate kept up, conjoined with subnit. bismuth :

R Bismuth subnit.....1 drachm.
Div. in chart. no. 12. Sig.—One every three hours.

" This seemed to have a good effect for a day or two, and I was congratulating myself on having made a permanent impression with the ergot, in which, however, I was doomed to be disappointed, as the disease in all respects renewed its former activity. It should have been mentioned that on the withdrawal of the ergot, a dose of ol. ricini was given, which, after evacuating the bowels of a few small scybala, was followed by a suitable opiate.

" Small doses of calomel, guarded with Dover's powder, were given at long intervals with gratifying results. The formula used was this :

R Hydrarg. sub. mur.....1 grain.
Pulv. opii et ipecac.....4 grains.
M. et div. in chart. no. 4. Sig.—One every five or six hours.

" During the use of this combination evacuations assumed for a day and a half an almost natural fecal appearance. Twice the tolerance for ipecac in the following was ineffectually tried :

R Pulv. ipecac.....1 grain.
Bismuth subnit.....1 drachm.
M. et div. in chart. no. 12. Sig.—One every three hours.

" Nausea resulting, discontinued.

" In short, I tried the methods of treatment which an experience of fifteen years had made familiar, and which for the most part had proved a fair success in the management of dysentery. Of course, I have given the merest outline, leaving many things pertinent, which would too much extend the limits of this article, to detail. Suffice to say, that I employed methods and means popularized by the approbation of the profession in general, but without avail.

" I was in despair. The boy must die under popular plans of management. I resolved to essay salol. To my knowledge, the drug had never been used in this city. I, therefore, took a few doses to satisfy myself of its genuineness and effects, and then commenced its use in accordance with the subjoined :

R Salol.....60 grains.
Div. in pulv. 30. Sig.—One every three hours.

" Followed, if there is pain, by :

R Morph. acetat.....1 grain.
Aquaæ.....20 drachms.
M. Sig.—One drachm, repeated often enough to allay pain.

" Sulphate of morphia or Dover's powder would doubtless answer the purpose as well. At the end of the first day there was evident improvement in the character of the evacuations and diminution of their number, temperature fell, pulse became slower, restlessness and fretfulness vanished as by magic. After the second day the dose was increased. Improvement continued, fever disappearing entirely, tongue cleaning and appetite returning.

" In all my experience I never saw the efficiency of a medicine so unmistakably portrayed by characteristic results. The effects following close in the wake of the cause. Dose for first two days was two grains every three hours, increased to three grains, and continued at that as the maximum for three days longer ; after

which it was given for five days longer in diminishing quantities till left off.

"In about ten days nearly 200 grains were taken, by a child five years old, and that without the least sign of oppression, disturbance of any kind of stomach, heart or kidneys, or of brain or mind. I believe salol is perfectly safe to be used in suitable doses at any age, and am persuaded from the above case and from a little experience in summer diarrhoeas, wherein its influence was unquestionably kindly and effective, that it is destined to be a valuable agent.

"I am desirous to give it a trial in one of those cases of infants under two years of age where the almost countless stools, distressing and agonizing tenesmus, uncontrollable restlessness, insatiable thirst, rapid emaciation, profound debility, and early supervening coma, have well-nigh invariably been followed by dissolution."

Dr. A. H. GOELET, New York, in an article *vide New York Medical Journal*, August 6th, 1887, says :

"Taking into consideration the change which takes place in the intestines, the thought occurred to me that it would be an excellent remedy for the antiseptic treatment of bowel complaints, including typhoid fever; and, acting upon this idea, I prescribed it in the first case which came under my observation.

"The patient was an adult who had a bad diarrhoea for three days, and had been treated thirty-six hours with bismuth, extract pancreatis, and sodium bicarbonatis, and a milk diet, with no benefit. I ordered ten grains of salol to be taken every two hours, and made him promise to report the next morning, which he did, saying that he had come only because he had promised to do so, but he was all right, and needed nothing else. The movements had ceased after the second dose, as had also the pain and wind cramps. I ordered him to take a dose an hour before each meal for two days, and then report again. The diet was not restricted, except that fruit and vegetables other than potatoes were forbidden. He reported according to promise, and his movements had been natural and once a day only, showing no constipating effect of the medicine, a condition which is often very troublesome after the opium treatment.

"Encouraged by this result, I next tried it in a case of acute indigestion or diarrhoea and vomiting in a child fifteen months old.

"I ordered one grain to be given every two hours, dry on the tongue, with a teaspoonful of water after it. The vomiting ceased immediately, and in six hours the diarrhoea had ceased. Ordered the powders to be continued every four hours. The next day the stools were natural, and the salol was discontinued.

"Case after case could be cited in substantiation of the correctness of this treatment, but it is sufficient to say that it is the only purely satisfactory remedy I have ever used in these cases, and I hesitate to trouble readers with a citation of so many cases so exactly similar in result.

"The application of salol in bowel complaints is very extensive. I have used it in all with the same pronounced success.

In typhoid fever, every three hours, there is nothing better. While I cannot say that it shortens the attack, it relieves the excessively disagreeable odor of the faeces and the tenesmus and flatulence produced by the accumulation of wind in the colon. In fact, I know of nothing which so satisfactorily relieves the accumulation of wind in the bowels in any condition.

"In one case in which there was looseness of bowels, with fever 100° to 100.5° F. in the morning, with an increase of one degree in the evening, with tenderness in the right iliac region and a typhoid odor to the stools, which were pale green, showing strong suspicion of typhoid fever, salol in 10-grain doses every two hours relieved the condition, and in a week the symptoms had disappeared. I believe in this case typhoid fever was aborted. I am the more willing to believe this after I have seen more of the prompt relief afforded by salol in the severe bowel trouble of genuine typhoid fever.

"Intestinal inflammation of children in summer, if treated by salol to correct putrefactive changes in the bowels, and a proper diet, need no longer be feared, unless it has been allowed to exist too long before treatment is begun.

"Diarrhoea and dysentery of children in summer are more promptly relieved by salol than anything else.

"Let me here outline a general course of treatment for these cases. To begin with, stop all food for twenty-four hours. If the little patient is thirsty, use a decoction of salep cold. This is made as follows: a saltspoonful of powdered salep is rubbed into a paste with a tablespoonful of cold water, and a pint of boiling water added slowly, stirring it all the while. This is set on the ice, and when cold it may be given to the child almost *ad libitum*, but in small quantities at a time. Give the salol in appropriate doses every two hours until there is marked improvement in the bowels, and apply something warm to the abdomen. In the majority of cases the little patient will be ready for food in twenty-four hours. This should be given in small quantities at first, and it must be of the proper kind.

"It is best to continue the salol for a day or two after the bowel trouble has subsided."

Dr. O. T. OSBORNE, New Haven, *vide* New York *Medical Journal*, April 7th, 1888, says:

"As Dr. Goelet urges, so have I found it to be necessary for immediate success in every case of acute diarrhoea to repeat the dose every two hours until the stools cease.

"The indications for salol in bowel troubles are vomiting, purging, cramps, all so-called 'summer diarrhoeas' of children, and I have even found it successful in prolonged diarrhoeas and in one case of dysentery.

"I have used it the most largely in the diarrhoea and vomiting of children, and in every case with success, the stools immediately becoming infrequent, assuming their natural color, and losing their offensive odor.

"I have used salol for diarrhoeas of all kinds in twenty-two cases occurring in August and September of last year without a single failure, so far as I know. Three patients did not report

to me after the first office visit, but I am confident, had they not been immediately cured, they would have returned on the next day. The remaining nineteen patients all reported cured.

"I will briefly mention a few cases which present points of interest :

"A woman, aged thirty-six, had had dysenteric bloody stools for a week. Treatment, '300 grm. (4.6296 grains) of salol every two hours. Cured in one day.

"A man, aged twenty-three, had had diarrhoea for six weeks, averaging five to six stools a day. Treatment, '300 grm. of salol four times a day. Cured on the third day.

"The youngest case in which I have used salol was a child, aged six months, with vomiting and purging. Treatment, '050 grm. every two hours. Cured in one day.

"The least number of doses that caused a cure was in a child, one year old, with purging that was cured with two doses of '050 grm. (.7716 grain) each.

"The case of acute dysentery before referred to was in a man aged forty. He had bloody and mucous stools for one week when he came under my care, having, he asserted, as many as sixty movements a day for the last two days, and, as a natural consequence, it was a very unfavorable case to treat. He has had attacks of dysentery every autumn for a number of years, but never so severe as this one. The treatment was '250 grm. (3.858 grains) of salol, internally, every two hours (the patient was too weak to give large doses), morphine, whiskey, and ice-water injections into the rectum. This treatment caused amelioration of the symptoms, but did not stop the tenesmus and the bloody stools. After using the ice-water injections for two days unsuccessfully, on the third day I ordered a four-per-cent. solution of salol in alcohol ; to inject two teaspoonfuls in water as often as he felt the tenesmus coming on. My theory of this injection was founded on the fact that such salol washes had been found of service in ulcers of the mucous membrane of the mouth, and they might prove of service in the ulcers of the bowel.

"The patient professed to have immediate relief from the tenesmus after the injection, and the *next day* he passed no blood, and faecal matter appeared in the stools. On the fifth day of the treatment the salol internally was stopped ; on the sixth day I stopped the injection, and reduced the morphine and whiskey. On the eighth day of treatment I renewed the salol internally, which had not been used for three days, as he had a slight diarrhoea, and gave it for three days.

"On the fourteenth day after treatment began I surprised him out-doors eating bananas, with a history of having eaten raw beef, and a pretty generous diet for the last four or five days, with no complaint from the bowels.

"I regret that I have had no case of acute dysentery since, in which to try the salol injections, but, although the salol may have had nothing to do with the cure, it appeared to relieve the tenesmus and to stop the loss of blood, and certainly deserves a further trial.

"I will cite one more case :

"A boy, aged sixteen, had had diarrhoea and cramps for two

days. I gave him '300 grm. (4'6296 grains) of salol four times a day. The next day there was no improvement, and the salol was increased to '300 grm. every two hours. He was immediately cured of both cramps and diarrhoea, showing the necessity of the frequent repetition of the dose, which I have many times demonstrated. On the same day that the stools ceased, his face and body were covered with an eruption of erythema. Was the erythema due to the intestinal irritation, or to the salol? As his previous diarrhoea should have removed any irritating substance in the bowels, and as I could not trace it to the ingestion of any food-stuff, it may have been due to the salol. At all events, the salol was stopped, and the eruption rapidly disappeared.

" Except in the case just mentioned, perhaps, I have seen unpleasant symptoms positively due to salol in only two instances.

" In one case there was a simple headache after '600 grm. (9'3592 grains) had been taken. The other case was that of a woman, aged thirty-seven, who had had diarrhoea and abdominal pain for a week. She misunderstood the directions, and took '300 grm. (4'6296 grains) every hour, until she had taken 2'400 grm. (37'0368 grains) in eight hours. She showed symptoms of intoxication—such as muscular weakness, faintness, and dizziness. These symptoms rapidly disappeared on the cessation of the salol.

" I have not given my experience with salol in rheumatism, because so much has already been written upon that subject, but when I give it for that disease I never omit the alkalies.

" As to salol in these diarrhoeal troubles, I cannot better end my paper than Dr. Goelet ended his, with, ' Try it, and see for yourself.'

" I must emphasize the fact that all of my patients, except the one with dysentery, were cured without opium in any form, and with no other medication than the salol. As you have seen, salol allays vomiting, although it is insoluble in the gastric juice; it may be due to an antiseptic action of the salol *per se.*"

Our Treatise on Salol, containing very valuable notes on the therapeutic properties of this new remedy, will be mailed on application.

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